WHAT IS CLAIMED IS:

1. A method for measuring surface irregularities, comprising:

illuminating a surface by at least two sources of light arranged along a row which is substantially perpendicular to a reference plane along which said surface is arranged,

determining an angle of incidence to at least one partial surface of said surface for each of said at least two sources of light,

generating a set of reflections from said surface for each of said at least two sources of light, wherein each set contains at least one reflection from said partial surface,

detecting with a light detector said set of reflections for each of said at least two sources of light,

extrapolating for each of said at least one partial surface an imaginary angle of incidence for which no reflection would be detected, said extrapolating being based on said set of reflections and said angle of incidence to said at least one partial surface for each of said at least two sources of light;

determining a first surface slope value of said partial surface, said determining being based on said imaginary angle of incidence; and

determining a first height profile for said surface, said height profile being based on said first surface slope value for said partial surface of said surface.

2. The method of claim 1, wherein said surface slope value is determined in more than one horizontal direction.

3. The method of claim 1, wherein said detecting said set of reflections for each of said at least two sources of light is carried out for each resolution pixel of said light detector.

4. The method of claim 3, wherein an iteration process for acquiring said surface height profile for the surface by integrating the slopes values ($\alpha_x(x,y)$, $\alpha_y(x,y)$) into a surface ($z(x,y)$) is executed as described in the following:

a. Every image pixel gets an initial height value $z(x,y)$,

b. Every pixel is tilted accordingly to $\alpha_x(x,y)$ and $\alpha_y(x,y)$,

c. A height correction value $corr(x,y)$ is calculated for every pixel as the mean height difference between the edges of the pixel and its four neighbours,

d. For every pixel: $z(x,y) = z_{old}(x,y) - corr(x,y)$, and

e. Steps c and d are repeated until a sufficient result is acquired.

5. The method of claim 4, wherein said iteration process is first carried out on relatively large surface elements, thus giving initial height values for iteration for relatively small surface elements.

6. An arrangement for measuring and evaluating surface irregularities, which arrangement comprises at least two sources of light arranged so as to illuminate a surface, said sources of light being arranged along a row which is substantially perpendicular to a reference plane along which said surface is arranged, each one of said sources of light presenting an angle of incidence to at least one partial surface forming part of said surface, said arrangement also comprising a control unit arranged so as to generate, by means of each source of light, a set of reflections respectively from said surface, wherein each set contains at least one reflection from said partial surface, and a light-sensitive detector arranged to detect said sets of reflections, characterized in that said control unit is adapted for extrapolating, for each partial surface and by means of detected light intensities for each one of the at least two light sources and their associated angles of incidence, an imaginary angle of incidence for which no reflection would be detected, said control unit furthermore being adapted for providing by means of said imaginary angle of incidence a surface slope value (α) of said partial surface in the direction of said sources of light, and for acquiring a height profile for said surface by means of the slope values for the partial surfaces of said surface.

7. The apparatus of claim 6, wherein said at least two of said sources of light constitute a generally vertical lamp array.

8. The apparatus of claim 7, wherein said sources of light are arranged along at least two generally vertical lamp arrays which are positioned in pairs substantially opposite to each other.